## Amendments to the Claims

- 1. (Canceled).
- 2. (Currently amended). A method of monitoring the effect of in vivo administration of a cathepsin S inhibitor to a subject, comprising the steps of:
  - a) taking a blood sample of the subject;
  - b) purifying the white blood cells from said sample;
  - c) making whole cell lysates of the purified white blood cells; and
  - d) analyzing the lysates for presence of a pl0Ii fragment of invariant chain (Ii) by a suitable assay method, wherein the presence of said pl0Ii fragment represents a block in degradation of the invariant chain due to inhibition of cathepsin S resulting from the in vivo administration of the cathepsin S inhibitor.
- 3. (Previously presented). A method of monitoring the effect of in vivo administration of a cathepsin S inhibitor to a subject as defined in claim 2 wherein the suitable assay method in step (d) is Western blotting or enzymelinked immunosorbent assay.
- 4. (Previously presented). A method of monitoring the effect of in vivo administration of a cathepsin S inhibitor to a subject as defined in claim 2 wherein the subject is a human.

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